

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A construct which comprises an antigen-presenting-cell (APC) targeting molecule coupled to an antigen, wherein said APC targeting molecule contains a mutant of superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:1, wherein the mutant has a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 and wherein ~~in use~~ the construct can bind to Class II MHC molecules.
2. (Cancelled)
3. (Previously Presented) The construct of claim 1, wherein the mutant of superantigen SMEZ-2 has a mutation at position 18 in SEQ ID NO:1, or C at position 42 (D42C) in SEQ ID NO:1.
4. (Previously Presented) The construct of claim 3, wherein the mutant of superantigen SMEZ-2 has C at position 42 (D42C) in SEQ ID NO:1
5. (Withdrawn) The construct of claim 1, wherein the mutant of superantigen SMEZ-2 has A at position 18 (Y18A) in SEQ ID NO:1, C at position 42 (D42C) in SEQ ID NO:1, L at position 75 (W75L) in SEQ ID NO:1, and Q at position 182 (K182Q) in SEQ ID NO:1.

6. (Withdrawn) The construct of claim 1, wherein the mutant of superantigen SMEZ-2 has C at position 42 (D42C) in SEQ ID NO:1, L at position 75 (W75L) in SEQ ID NO:1, and Q at position 182 (K182Q) in SEQ ID NO:1.

7. (Previously Presented) The construct of claim 1, wherein the APC targeting molecule is coupled to ovalbumin.

8. (Withdrawn) The construct of claim 1, wherein the APC targeting molecule is coupled to tetanus toxoid (TT) or a peptide thereof.

9. (Withdrawn) The construct of claim 1, wherein the APC targeting molecule is coupled to LCMV peptide.

10. (Previously Presented) The construct of claim 1, wherein the coupling between the antigen-presenting-cell (APC) targeting molecule and the antigen is reversible.

11. (Previously Presented) The construct of claim 1, wherein the antigen is a protein or a peptide.

12. (Previously Presented) A pharmaceutical composition comprising the construct of claim 1 and one or more pharmaceutically acceptable carriers, adjuvants, excipients and/or solvents.

13. (Previously Presented) A vaccine comprising the construct of claim 1.

14. (Withdrawn) A method of therapeutic or prophylactic treatment of a disorder which requires the induction or stimulation of the immune system, comprising the administration to a subject requiring such treatment of the construct of claim 1.

15. (Withdrawn) A method as claimed in claim 14 wherein the disorder is selected from the group consisting of bacterial, viral, fungal or parasitic infection, autoimmunity, allergy and/or pre-neoplastic transformation.

16. (Cancelled)

17. (Withdrawn) A method of preparing the construct of claim 1 comprising the steps of:

- a. introducing a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 to produce a mutant of superantigen SMEZ-2, and
- b. coupling the mutant of SMEZ-2 to an antigen.

18. (Previously Presented) A construct prepared by:

- a. introducing a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 to produce a mutant of superantigen SMEZ-2, and
- b. coupling the mutant of SMEZ-2 with an antigen.

19. (Previously Presented) A superantigen, which has the amino acid sequence of SEQ ID NO:1 but for a mutation at one or more positions of 18, 42, 75 and 182 in SEQ ID NO:1.

20. (Previously Presented) A superantigen as claimed in claim 19, wherein the superantigen has:

Y18A;
W75L;
K182Q; or
D42C.

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21. (Withdrawn) A superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:2.

22. (Withdrawn) A superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:3.

23. (Withdrawn) A nucleic acid encoding any one of the superantigens of claim 18.

24. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 18.

25. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 19.

26. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 20.

27. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 21.

28. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 22.

29. (Withdrawn) The construct of claim 3, wherein the mutant of superantigen SMEZ-2 has A at position 18 (Y18A) in SEQ ID NO:1